



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/082,874

02/26/2002

Tomas Diez

02-171

4966

7590 09/17/2008
GEORGE A. CORY
BACHMAN & LaPOINTE, P.C.
Suite 1201
900 Chapel Street
New Haven, CT 06510-2802

EXAMINER

VO, HUYEN X

ART UNIT

PAPER NUMBER

2626

MAIL DATE

DELIVERY MODE

09/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/082,874	DIEZ ET AL.	
	Examiner	Art Unit	
	HUYEN X. VO	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/26/2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 6/11/2008 have been fully considered but they are not persuasive.
2. In response to applicant's argument regarding the system of Salazar et al. fail to teach a control module being located far away from the remote command receiver and is outside the noise zone (*page 1-2 of the REMARKS section*), Salazar et al. fully disclose this feature in that the controlled device located far away from the control module (*col. 8, lines 56-61 "remote system"*). Furthermore, HVAC systems are traditionally known to be located outside of the building and are far away from the control module (e.g. thermostat), which is often located inside of the building in a convenient location for the users. With good insulation in large buildings (e.g. hotel, mall, etc), the location of the control module would be well beyond the noise zone produced by the HVAC systems. The only feature Salazar et al. do not teach is the specific noise zone of 60 dB A produced by the HVAC systems. And ESI Engineering reference was relied upon for the teaching of a HVAC system producing a noise zone of 60 dB A.
3. Examiner noted that the citation "*(wireless communication between module 1 and module 2 in figure 6)*" in claims 3-6 was an error. As indicated, official notice was taken for the rejection of all claims 3-6.

4. The applicant has also challenged the official notice that examiner relied upon for the teaching of wireless communications including light-based and infrared communications claimed in claims 3-6. Geilhufe et al. (USPN 6584439) is now relied upon for the teaching of these limitations.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2, 7-10, 12, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salazar et al. (US 5774841) in view of ESI Engineering Publication.

7. Regarding claim 1, Salazar et al. disclose a control system for a heating, ventilating or air conditioning (HVAC) system, comprising:

a remote command receiver for receiving instructions for said HVAC system
(*controlled system 30 or external computer 40 in figure 1*); and

a control module (*speech recognizer 100 in figure 1*), comprising:

(i) a speech receiving member for receiving speech commands (*audio transducer 20 in figure 1 for receiving speech instructions*); and

(ii) a converter for converting said speech commands to HVAC system instructions (*col. 7, lines 24-35 or speech recognizer 100 issuing HVAC instruction upon recognition of the input speech command*); wherein said control module is communicated with said remote command receiver for conveying said HVAC system instructions from said control module to said remote command receiver (*col. 7, lines 24-35, the speech recognizer 100 issues instructions to the controlled system 30 or external computer 40 in figure 1*); said control module is positioned relative to said component outside of said noise zone (*speech recognizer 100 or control module is located far away from the controlled system 30 or external system 40 in figure 1 as indicated by the communication paths 53 and 54; also, referring to figure 2, the control module or computer system is located far away from the robotic system 75 as indicated by the communication path 13*).

Salazar et al. fail to specifically disclose wherein said heating, ventilation or air conditioning system includes an HVAC component which generates a noise zone wherein operating noise of said component is greater than 60 dB A. However, ESI Engineering teaches an HVAC component which generates a noise zone wherein operating noise of said component is greater than 60 dB A (*Table on the first page, right column*).

Since Salazar et al. and ESI Engineering are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Salazar et al. by incorporating the teaching of

Art Unit: 2626

ESI Engineering in order able technician to install control module outside of the noise zone to prevent noise from corrupting input speech commands to improve speech recognition accuracy.

8. Regarding claim 2, Salazar et al. further disclose the control system of claim 1, wherein said control module further comprises a transmitter for transmitting said HVAC system instructions to said remote command receiver (*speech recognizer 100 in figure 1 transmits instructions to the controlled system 30 or external computer 40*).

9. Regarding claims 7-10, Salazar et al. further disclose the system of claim 1, wherein said control module further comprises an indicator member for identifying a received speech command (*col. 7, lines 35-55, indicator member can be a speaker for output audible feedback or monitor for displaying visual feedback*), and wherein said control module further comprises a storage member for storing known speech patterns and corresponding indicators (*col. 7, lines 32-38, feedback is an audio message suggesting that the audio message is pre-stored in the system*), and wherein said control module is adapted to compare said received speech command with said known speech patterns and to output an indicator corresponding to said received speech command (*col. 7, lines 35-55, audio feedback message is sent to audio transducer or speaker*), wherein said indicator member is a speech simulator and said corresponding indicators are signals for generating speech (*col. 7, lines 35-55, audio feedback message is sent to audio transducer or speaker*), and wherein said storage member

Art Unit: 2626

also stores commands for generating the HVAC system instructions corresponding to said known speech patterns whereby said control module acknowledges said received speech command and transmits corresponding to HVAC system instructions (*referring to system in figure 1; speech recognition unit 100 recognizes the input speech command and issues instructions to the controlled system 30 (HVAC) or external computer 40*).

10. Regarding claims 12, Salazar et al. further disclose the system according to claim 1, wherein said control module further comprises a base member adapted for supporting said module on a flat surface (*speech recognizer 100 in figure is a processor housed within a circuit board on a flat surface*).

11. Regarding claim 25, Salazar et al. further disclose a method for operating a system according to claim 1 to control a heating, ventilating or air conditioning (HVAC) component, comprising the steps of:

positioning said control module outside said noise zone (*speech recognizer 100 or control module is located far away from the controlled system 30 or external system 40 in figure 1 as indicated by the communication paths 53 and 54; also, referring to figure 2, the control module or computer system is located far away from the robotic system 75 as indicated by the communication path 13*);

receiving a speech command at said control module (*audio transducer 20 in figure 1 for receiving input speech commands*);

converting said speech command to HVAC system instructions at said control module (*speech recognizer 100 in figure 1 issuing HVAC instructions, upon recognizing the input speech command, to the controlled system 30 or external computer 40*); and

sending said HVAC system instructions from said control module to said component (*speech recognizer 100 in figure 1 issuing HVAC instructions, upon recognizing the input speech command, to the controlled system 30 or external computer 40*).

Salazar et al. fail to specifically disclose providing said heating, ventilation or air conditioning component which generates a noise zone wherein operating noise of said component is greater than 60 dB A. However, ESI Engineering teaches providing said heating, ventilation or air conditioning component which generates a noise zone wherein operating noise of said component is greater than 60 dB A (*table in the first page, right column*).

Since Salazar et al. and ESI Engineering are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Salazar et al. by incorporating the teaching of ESI Engineering in order able technician to install control module outside of the noise zone to prevent noise from corrupting input speech commands to improve speech recognition accuracy.

Art Unit: 2626

12. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salazar et al. (US 5774841) in view of in view of ESI Engineering Publication, and further in view of official notice.

13. Regarding claims 3-6, Salazar et al. fail to specifically disclose wherein said transmitter is a wireless transmitter, and said remote command receiver is a wireless receiver, wherein said transmitter and said remote command receiver are communicated by wireless communication selected from the group consisting of light-based communication radio communication and combinations thereof, wherein said transmitter and said remote command receiver are communicated by light-based communications, wherein said transmitter and said remote command receiver are communicated by infrared communications. However, examiner takes official notice that these types of transmitters are well-known in the art.

14. Claims 11, 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salazar et al. (US 5774841) in view of in view of ESI Engineering Publication, and further in view of Bush et al. (US 6397186).

15. Regarding claim 11, Salazar et al. fail to specifically disclose the system of claim 1, wherein said control module further comprises a neural network adapted to train said control module for receiving personalized speech commands, and a storage member for storing personalized speech data and corresponding HVAC system instructions.

Art Unit: 2626

However, Bush et al. teach that the control module further comprises a neural network adapted to train said control module for receiving personalized speech commands, and a storage member for storing personalized speech data and corresponding HVAC system instructions (*col. 10, line 47 to col. 11, line 7*).

Since Salazar et al. and Bush et al. are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Salazar et al. by incorporating the teaching of Bush et al. in order to improve speech recognition accuracy.

16. Regarding claim 13, Salazar et al. fail to specifically disclose the system according to claim 12, wherein said control module further comprises a plug member for connecting to an AC power source and an AC-DC transformer for supplying DC power to said control module. However, Bush et al. teach that said control module further comprises a plug member for connecting to an AC power source and an AC-DC transformer for supplying DC power to said control module (*col. 9, lines 13-19*).

Since Salazar et al. and Bush et al. are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Salazar by incorporating the teaching of Bush et al. in order to provide power for the system.

17. Regarding claim 14, Tamura fails to specifically disclose the system according to claim 12, wherein the speech receiving member comprises a multi-directional

Art Unit: 2626

microphone. However, Bush et al. teach that the speech receiving member comprises a multi-directional microphone (*col. 7, lines 33-52*).

Since Tamura and Bush et al. are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Tamura by incorporating the teaching of Bush et al. in order to obtain a stronger speech command signal while minimizing introduction of unwanted noise.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Geilhufe et al. (USPN 6584439) and Johnstone et al. (USPN 4462080) are considered pertinent to the claimed invention.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2626

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUYEN X. VO whose telephone number is (571)272-7631. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Huyen X Vo/
Primary Examiner, Art Unit 2626

9/3/2008
